The Promise and Pitfalls of Transparency: Evidence from State Transparency Initiatives

by

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Abstract

I examine how state government transparency initiatives impact state performance. Specifically, I examine how variation in state spending transparency impacts state expenditure efficiency, expenditure responsiveness, and solvency. Transparency is often touted in contemporary society as an exemplary governance tool and an essential ingredient in resolving agency conflicts. Greater transparency in government is said to foster more public accountability and more efficient use of scarce taxpayer dollars. However, transparency also motivates short-termism, "you-get-what-you-measure" phenomena, and selective accountability to vocal or majority constituents. Utilizing state transparency initiatives and third party assessments of state expenditure transparency websites I am able to identify variations in state-level transparency efforts. I find that more transparent states are more efficient (e.g., lower expenditures per capita) and more responsive to constituents (e.g., higher expenditures on voter priorities), but there are discernable pitfalls. For example, I find that more transparent states are selectively responsive based on party affiliation and favor current performance at the expense of long-term solvency.

Chapter 1 Introduction

Transparency is often touted in contemporary society as an exemplary governance tool and an essential ingredient in resolving agency conflicts. Transparency is a broad term used to describe the relative accessibility and availability of information. In the context of governance, transparency is operating in such a way that it is easy for others to see what actions are performed (Elert, Henrekson, & Sanders 2019). For governments, greater transparency is said to foster more public accountability and more efficient use of scarce taxpayer dollars (Cucciniello et al. 2017; La Porta et al. 1999). Skeptics, on the other hand, focus on the pitfalls of transparency and question whether the increased flow of information is meaningfully actionable (Bannister and Connolly 2012; Grimmelikhuijsen 2012; de Fine Licht 2011). In this paper, I use the expenditure transparency initiatives of state governments to assess the promise and pitfalls of state reporting transparency.

State governments collectively spent $2.3 trillion and employed 5.4 million people in 2017.[1] Despite established control mechanisms and reporting processes, public concerns over wasteful or inappropriate spending are common, with a 2009 Gallup poll finding that on average, Americans believe 42 cents of every dollar spent by state governments is wasteful. Proponents of greater government transparency suggest that revelation of expenditure details and spending processes allows for increased taxpayer monitoring and scrutiny, leading to better decisions by

[1] According to the 2017 U.S. Census of Governments.

political agents and ultimately higher quality government.[2] This is in line with studies in corporate settings, where calls for transparency usually invoke agency-theoretic arguments that more or better financial information makes informed insiders more accountable to external stakeholders (Barth et al. 2013; Glassman 2002; Holmstrom 1979).

Transparency in state governments, however, is not a panacea. For instance, a prominent concern in governmental settings is that citizens are not sufficiently sophisticated to understand and process the information disclosed via various transparency initiatives (Bannister and Connolly 2012; Naurin and Fellow 2006; Fenster 2006). The agency literature also suggests that, in some settings, transparency contributes to contracting inefficiencies; e.g., by precluding longer-term contractual commitments, motivating short-termism, or promoting "you-get-what-you-measure" types of phenomena. For example, if decision-makers are accountable for their transparent actions but not for the consequences of all their decisions, then decision-makers will conform to their expected actions with less regard for overall organizational efficiency (e.g., Prat 2005). Yet another pitfall in governmental settings holds that transparency motivates selective accountability in the sense that decisions favor the interests of vocal or majority constituents rather than the interests of the public as a whole. For instance, Maskin and Tirole (2004) suggest that making government officials more accountable to voters motivates pandering to majority public opinion, again with little regard for overall performance.

In this paper, I test how transparency relates to state government performance. I first consider the promise of transparency; the association between state government performance and state expenditure transparency initiatives. For constituents interested in specific policy initiatives

[2] https://www.oecd.org/gov/budgeting/best-practices-budget-transparency.htm

(education, health, etc.), government performance is often judged by its ability to deliver specific policy outcomes (Afonso et al. 2005; Tanzi and Schuknect 1997; 2000). At a more aggregate level, the political science and political economy literatures suggest three distinct constructs of overall performance: efficiency, responsiveness to constituents, and effectiveness in successfully implementing government policies (Kosack and Fung 2014; La Porta et al. 1999; Piotrowski 2008; Shah 2005). For example, Shah (2005) proposes efficiency, "providing services of a given quality in the least-cost manner," and responsiveness, "providing services consistent with citizen preferences." While La Porta et al (1999) propose efficiency, government output relative to input, and effectiveness, the degree of successful policy implementation.

Following this literature, I adopt state government expenditure "efficiency" and expenditure "responsiveness" as distinct constructs of state performance.[3] I measure expenditure efficiency in two ways: expenditures per capita and expenditure as a percentage of state GDP (see also Hauner and Kyobe 2008; Hauner 2008; Afonso and Fernandes 2007).[4] I measure expenditure responsiveness as the interaction of spending ratios and voter priorities. Spending ratios compare spending by category or service area (e.g., education, healthcare, public assistance) to total general expenditures. Voter priorities are captured through annual Pew Research Center polls. This interaction captures the allocation each category of state spending receives of total general funds and its implied importance to voters. A more responsive

[3] To address any concerns over the measures selected, I also consider stewardship as an alternate measure of state performance. Cuny, Kim, and Mehta (2020), define stewardship as "the proper oversight and use of public funds".
[4] Government efficiency has been measured in various ways in the political science and public policy literatures. The primary focus of these measures is on socio-economic indicators that are presumed to be the target of government spending (infant mortality, elementary education enrollment rates, etc.). However, these measures do not address overall government spending, but only highly specific areas of spending. Hauner and Kyobe (2008) create a large cross-country panel dataset and find that expenditure relative to GDP is associated with lower efficiency across sectors.

government would therefore be one that allocates a higher percentage of resources to areas of greater voter priority.

Currently, all state governments have transparency initiatives whereby expenditure information is made publicly available online.[5] Each state operates its own spending website that varies as to the information's granularity, searchability, and completeness. This state-level variation in transparency allows for an organization-level study as opposed to the standard approach in prior literature which measures transparency at the country level.[6] I measure a state government's transparency in two ways. First, for 2006-2016, I assess transparency as a binary decision, i.e., whether the states provided spending information publicly online in a given year or they did not. Second, for 2010-2016, I use transparency scores from annual assessments of state spending transparency websites provided by the United States Public Interest Research Group (PIRG) and the Frontier Group. The assessments, known as the "Following the Money" Reports, score [on a scale of 0-100] states on the detail and completeness of spending transparency. Based on these scores, states are also separated by performance, labeled as "leading" [score of 80-100], "middling" [score of 50-79], etc.

I find that more transparent states are more efficient with their expenditures. For example, I find that states receiving a "passing" score [score of 50-100] spend $1,089 less per capita than states receiving a "failing" score [score of 0-49]. Among those states receiving a passing grade, there is also some evidence that states labeled as leading were more efficient than

[5] States began disclosing spending-related information online as early as the 1990's, but the majority of the transparency websites became available between the mid 2000's and mid 2010's.
[6] For example, Bushman et al. (2004) and Lang and Maffet (2011a, 2011b) measure transparency based on the regulatory and institutional environments of a nation. An exception is Barth et al. (2013) which measures firm-level transparency based on the explanatory power of the relation between a firm's returns and its earnings.

other states. For example, leading states' expenditure as a percent of GDP is two percentage points lower compared to failing states; a difference that is 14.2% of the sample mean. I also find that transparent states' expenditure allocation decisions are responsive to voter priorities of a given year. In particular, more transparent states have higher (lower) allocations [as a percent of general state expenditure] for spending categories that voters deem high (low) priority. For example, a ten point increase in a state's PIRG score is associated with a -0.14 percentage point difference in total general state expenditure allocated to categories of high voter priority; a difference of $59.1 million at the sample mean. Moreover, I find that these results prevail for the individual categories of state expenditures.[7] Altogether, my findings support that transparent states are responsive to voters.

While these results suggest that transparency has promise for state performance, it does not mean increased transparency is without its pitfalls. As noted earlier, there is literature suggesting that transparency motivates short-termism, "you-get-what-you-measure" phenomena, or selective accountability to vocal or majority constituents. I consider these unintentional consequences in two ways. First, to assess selective accountability, I find evidence that transparent states with Republican (Democratic) governors are more responsive to Republican (Democratic) voter priorities. Second, to assess how transparency affects short versus long-term decision making, I use solvency measures as indicators of how a state's short-term focus can be counterproductive.[8] In brief, I find that transparent states are less solvent with the effect most

[7] As opposed to pooled by high and low priority.
[8] Solvency is measured in three ways. Two are traditional measure of state government solvency, net asset ratio and long term liability ratio, as captured by the Mercatus Group. The third is a measure of the impact of unfunded pension liabilities on state solvency per capita established by Truth in Accounting (TIA).

evident in states graded as “leading” in transparency. For example, compared to failing states, leading states exhibit an $8,009 larger deficit per capita, nearly double the sample mean.

My study is subject to a number of limitations and caveats, which I acknowledge and address in the paper. One caveat of particular importance is the threat of reverse causality. It is possible that more efficient or responsive states are more likely to be transparent due to some perceived benefit of signaling these qualities. To address this concern, I consider both the other possible motivators for implementing a transparency initiative, as well as more direct tests of how efficiency influences transparency initiative implementations. I do not find any evidence to support reverse causality. Another limitation of note is that I rely on transparency scores developed by the PIRG. As an alternative, I use an independent assessment of county transparency developed by the Sunshine Review. Evidence from supplementary analyses with this alternative sample confirm my findings.

Overall, my results suggest that transparency has promise and improves state performance, measured as efficiency and responsiveness to voters, but there are discernable pitfalls. First, more transparent states are selectively accountable to specific constituents. Second, consistent with literature that documents how disclosure exacerbates myopic decision-making in corporate settings (Graham, Harvey, & Rajgopal 2005; Brochet, Loumioti, & Serafeim 2015; Ernstberger et al. 2017), I find that transparent states shortchange long-term success.

My findings also contribute to the public policy literature concerned with the effectiveness of transparency in government. There is a long-standing assumption that increasing transparency will improve the quality of government (Cucciniello et al. 2017). However, recent studies question this assumption by suggesting that government transparency has exacerbated polarization in public discourse (Grumet 2014). While the political ramifications of transparency

is beyond the scope of this paper, my results suggest that state transparency initiatives implemented over the last decade have had real economic consequences.

The remainder of this paper is organized as follows. Section 2 discusses background and conceptual underpinnings. Section 3 details the data. Section 4 describes research design and empirical results. Section 5 discusses the alternative sample, while Section 6 concludes.

Chapter 2 Institutional Background and Conceptual Underpinnings

2.1 State Government Operations and Budgets

In many ways, state governments operate like any other organization. Endowed with resources, state governments perform established sets of activities for the benefit of their stakeholders. State governments pick up where the federal government leaves off, but often with more complex constitutions and more daily contact with citizens than their federal counterpart. State responsibilities include the education of residents, public aid and safety, justice systems, public health, maintenance of state highways and administration of local roads, setting up local governments, and more. These functions include differing levels of input and cooperation from federal and local governments, but are ultimately the responsibility of the individual states. As a result, all fifty states engage in a similar set of activities and under the same guidance from the federal government.

States follow a relatively uniform budgeting process (Wallin 1998). The fiscal year in most states runs from July 1st through June 30th. The process begins in July or August when a state's budget office sends out requests for input from individual departments and agencies. These requests often include a questionnaire sent out to each agency or department with the budget office's expected range of resources to be allocated. The questionnaires are completed, compiled by the budget office, and a proposed budget is assembled by the executive branch. The budget moves to an appropriations committee, and then eventually on to the two houses of the

legislature, before returning to the executive branch for approval.[9] Each step involves edits and negotiations, which can include last-minute line item vetoes from the governor's office, before the final budget is approved. This process is consistent across states, with some variation in the composition of the appropriations committee, the use of super majorities to overrule standard practices, and the exact extent of executive powers (Wallin 1998). Possibly the largest difference in budgeting practices among states is that 21 states opt for a biennial process in the hopes of allowing for more floor time on non-budget matters. The state budget process, while at times viewed as tedious, is similar and yet more streamlined compared to its federal equivalent.[10]

The state budget process is typically incremental. Discussions often focus on changes from the prior budget, often the removal or creation of line items. As a result, established spending levels rarely change. Attempts at comprehensive budget reform have been historically unsuccessful (National Conference of State Legislatures 1995). The most common restriction on state government budgets is that they be balanced. Currently, all states except Vermont require a balanced budget in some form.[11] While balanced budget requirements vary in their implementation, prior literature shows that balanced budget restrictions are associated with increased tax revenue and reduced spending, as well as a reallocation of assets and the movement of revenue among funds that are and are not subject to balanced budget requirements (Alt and Lowery 1994; Poterba 1994, 1996; Bohn and Inman 1996, Costello et al 2017).

[9] Note that Nebraska has a unicameral legislature and therefore the budget is reviewed by the single legislative body.
[10] The federal process requires movement through 15 different committees (and their sub-committees) as opposed to the single appropriations committee approach at the state level.
[11] States have varied in their balanced budget requirements, with every state requiring balanced budgets at some point in the last 10 years, including Vermont.

Overall, the state budget process acts as a control mechanism and is arguably the largest influence on actual state spending. State spending (and government spending in general) is also scrutinized by outsiders. As noted earlier, public concerns over wasteful or inappropriate spending are common (Gallup 2009). Transparency is suggested as a solution to these concerns, as it increases taxpayers' and other outsiders' ability to monitor and scrutinize government spending. For instance, the U.S. Public Interest Group, in their first report on state spending transparency in 2010, state: "The ability to see how government uses the public purse is fundamental to democracy. Spending transparency checks corruption, bolsters public confidence in government, and promotes fiscal responsibility."

Currently, all 50 states operate its own website dedicated to spending transparency. States vary as to how the websites were introduced and implemented. The majority of states [36 out of 50] initiated transparency websites between 2008 and 2010. This was likely heavily influenced by the 2008 Senate Bill 3077 that focused on providing more information on government spending and sponsored by the then likely Democratic and Republican nominees for president, Senators Barack Obama and John McCain, respectively. The bipartisan support of the federal bill was largely reflected at the state level as well. While the state transparency initiatives were implemented by legislation, executive order, or direct action of the state comptroller or treasurer, there was also largely bipartisan support across states.[12] States were likely also influenced in starting a transparency initiative by the American Recovery and Reinvestment Act (ARRA) of 2009, which requires states to track federal stimulus funds. While tracking stimulus funds would

[12] I hand check the nature of implementation for all 50 states and noted the political affiliation of those sponsoring the new transparency system to confirm the states.

not require checkbook level detail, states like Minnesota note the need to track federal stimulus spending as the kicking off point for a discussion on greater spending transparency.[13]

In addition to the when and how of implementation, these websites vary in granularity, searchability, and completeness of information made available to the public both through time and among states. For example, the states of Washington and Alaska both created a transparency website in 2008. By 2010 the state of Washington only provided spending information aggregated at the agency level for the year. In comparison, Alaska provided more detailed checkbook level information in 2010, though it was not searchable. By 2016, Washington modified its website to be more interactive, allowing for users to select the level of spending information they would like to see. Alaska's website did not change between 2010 and 2016, and even regressed as to how often the website was updated with timely information. Meanwhile, the state of Iowa did not create a transparency website until 2012, but by 2016 the website had superior search function to both Washington and Alaska, allowing users to search by department, program, vendor, or expense category. See Appendix B for some examples of these state transparency websites from across the sample period.

2.2 Transparency and State Government Performance

Although the definition of transparency has evolved over time, the idea that transparency promotes good government is not a new concept. Rousseau and other notable French 18th century revolutionaries were the first to talk about "visibility" and "openness" as a way of governing. The more contemporary definition of transparency has closer ties in history to the sentiments laid out by Louis Brandeis in 1913: "Sunlight is said to be the best of disinfectants; electric light the

[13] https://mn.gov/mmb/transparency-mn/mat.jsp

most efficient policeman." However, it was not until the 1990's that the term "transparency" was thought of as a synonym for good governance (Hood 2006).[14]

As noted in the introduction, calls for transparency usually invoke agency-theoretic arguments that better or more frequent financial and non-financial disclosures improve the agency relationship. The promise of transparency, however, may not be realized if the information released through transparency initiatives is not understandable, easily processed, or digestible. Concerns about understandability is particularly salient in government settings because the promise of improved agency relationships is based on the assumption that citizen-principals who receive state budget and expenditure information released by state governments are sufficiently sophisticated to properly process the information. And, even if the information is processed, there is a presumption that citizens will act on the information reasonably, free from various cognitive biases (Etzioni 2010; 2014).

More generally, the promise of transparency may not be realized because transparency entails a number of pitfalls. One conventional pitfall holds that greater transparency (by a corporation or a government) also informs competing third parties who exploit the information to their advantage.[15] A second pitfall revolves around the idea that transparency (e.g., via better and more frequent information) exacerbates agency conflicts because it discourages longer-term relationships between principals and agents (Laffont and Tirole 1993). Both pitfalls are significant in corporate settings but unlikely to be important in state government settings. Unlike

[14] There are different explanations as to why transparency as a term experienced a rise in popularity starting in the 1990s. The creation of Transparency International in the early 1990's is likely one explanation. The rise of technology, the internet, and the ability to store and process large amounts of data were significant influences as well (Birchall 2011; Margetts 2006)

[15] In corporate settings, this argument is labeled usually as the proprietary-cost hypothesis. In a similar vein, federal governments also may have cause for concern that transparency could present a national security threat. This concern does not apply to state governments.

corporations who may be reluctant to be transparent for, say, competitive reasons, state governments do not have outside competitors and thus are not concerned about how greater transparency informs competing third parties[16]. State governments are also not subject to elaborate contractual mechanisms (e.g., via market-based performance metrics) that govern their agency relationship with citizens, except periodically via voting. Hence, the idea that transparency limits contracting opportunities and exacerbates agency conflicts is unlikely to prevail in state government settings.

The political science and political economy literatures suggest three distinct performance constructs, efficiency, responsiveness to constituents, and effectiveness (Kosack and Fung 2014; La Porta et al. 1999; Piotrowski 2008; Shah 2005) that capture different dimensions of good government. Following La Porta et al. (1999) and Shah (2005), I adopt efficiency as an important indicator of state government performance. A conventional definition of efficiency is to refer to the economical use of input resources relative a given level of output. This definition usually translates to a statement about the provision of governmental services of a given quality in the least-cost manner, or in some contexts, the reduction of waste, abuse, or fraud previously undetected. Thus, if state governments are transparent about their various expenditures and this improves their agency relationship with citizens, then I expect states will be more efficient in expending government resources.

In contrast to efficiency, which has an input focus, responsiveness to constituents and effectiveness are more outcome oriented performance indicators. La Porta et al (1999) define

[16] It could be argued that states do have to compete for both companies and people to locate in their states. For companies, the incentive is usually tax motivated and therefore more transparency could reveal favorable tax incentives states have used for companies to locate there. However, as companies are fully informed on the offers made available to them, it is reasonable to believe that states are also aware of competing offers.

"effectiveness" as the degree of successful implementation of government policies. Shah (2005) promotes the notion of "responsiveness to constituents" to emphasize an explicit alignment with citizens' priorities. These priorities usually include objectives far broader than concerns about efficiency. For instance, if citizens' priorities call for more expenditures on education or infrastructure, then state governments that are more transparent about their specific expenditures in those categories allow citizens (principals) to better monitor government performance in relation to their objectives.

Although the above argument assumes that responsiveness to constituents is a characteristic of good government, there are potential drawbacks. If transparency motivates "selective accountability" in the sense that decisions favor the interests of select constituents (some principals) rather than the interests of the organization as a whole, then transparency may be counterproductive. For instance, Maskin and Tirole (2004) suggest that making public officials too accountable motivates pandering to majority public opinion, with little regard for other constituents' welfare.

Similarly, agency theory suggests that if decision-makers are held accountable for their more visible and transparent actions but not for the performance consequences of all their decisions, then decision-makers will unduly focus on their expected actions with minimal regard for overall organizational efficiency (e.g., Holmstrom and Milgrom 1991; Prat 2005). This implies that, in some circumstances, transparency exacerbates agency conflicts by motivating short-termism or promoting "you-get-what-you-measure" types of phenomena (Graham et al. 2005; Brochet et al. 2015; Ernstberger et al. 2017).

Chapter 3 Data, Measures, and Descriptive Statistics

3.1 Data and Variable Descriptions

The data for this study are taken from a variety of public government online sources, as well as hand collected from requested or published government and third party reports.

3.1.1 Transparency

For the purposes of this paper, transparency in the state government setting is defined as the level of information revealed around state spending. While states may engage in more than financial transparency, state spending is a clear revelation of actions, revealed with "transparency" in mind, and measurable. I measure the transparency of state government spending in two ways. The first is a binary measure of whether a state had a transparency initiative in a given year. I hand collect the implementation year for each state by carbon dating individual state transparency websites.[17] I verify the implementation year through searches of news archives, state legislature records, and gubernatorial reports. *Implemented* is therefore a dichotomous variable set to one (1) if a state had a transparency initiative in the given year, and zero (0) otherwise.

The second measure of transparency relies on variation in the execution of these websites. To assess state transparency efforts, I utilize third party assessments of each state's

[17] Carbon dating a website is a technique that systematically checks the first time a website appears or is indexed on other websites (including twitter, bitly, various web archives, Google, etc.). I use a tool made available by computer science researchers at Old Dominion University. Available here: http://carbondate.cs.odu.edu/

transparency website completed by the Frontier Group and the United States Public Interest Research Group (PIRG). These "Following the Money" reports, published annually from 2010 to 2016, grade each state on their spending transparency efforts.[18] The grading of a state's transparency efforts are based on the level of detail and completeness of transparency, as well as the searchability of the information provided. Assessments are made through examination of the state's available transparency resources and discussion with each state's treasury office.

The "Following the Money" reports evaluate states based on a defined methodology and assess each state a score on a scale of 0-100, captured as the continuous variable *PIRG Score*.[19] Based on these scores, states are separated into performance tiers. States are considered *Leading* with a grade of 80 or above. These states provide checkbook-level spending information with few restrictions, the ability to search and parse data, and easier access to download data. *Middling* states fall in the range of 50-79 points and provide some checkbook level detail, but may lack the searchability and/or breadth and depth of the information provided by those states in the *Leading* category. The combination of these two groups are considered *Passing* states [a grade of 50 points or higher]. All information from the PIRG reports are hand collected.

The advantages of utilizing these third party reports as opposed to using a textual analysis process (e.g. "fog" or some similar metric) are twofold. First, the variation over time of these websites would be difficult to retroactively apply any measure consistently across all 50 states. The PIRG reports have the advantage of assessing state websites annually, along with directly interacting with those that oversee the websites from each state. Second, measures that are

[18] The PIRG, faced with limited resources, and high investigation times and costs switched to a rotating schedule of assessment for states and only published "Following the Money" reports on state efforts every other year after 2016.
[19] Some late reports further break states into five categories as opposed to the original three. For consistency, I use the original three categories, being sure to use the same cutoff points in later years.

traditionally used for textual analysis would not match the type of information that states are sharing. Traditional textual analysis tools are often intended for the "readability" of text, as opposed to the availability or accessibility of information. These websites are often a public checkbook where payments are recorded with varying levels of detail depending on the state and year, making the assessment by the PIRG more relevant to measuring the availability or accessibility of information provided. Please see Appendix B for samples of the state websites.

An important limitation of using state spending websites is that while the discussion of state spending transparency is centered on the importance of taxpayers being able to monitor and scrutinize government actions, it is not abundantly clear who is actually using these state spending websites. Some states make disclosures about website traffic to the PIRG or on their websites that make it clear the websites are being used, but overall it is unclear whether transparency websites are being viewed by voters or some other outsiders. For example, website traffic could be coming from coalitions, watchdog groups, or the press all looking for information for their own purposes as opposed to a concerned citizen attempting to monitor state actions. However, these alternative viewers indirectly fulfill a similar purpose, in that there is increased scrutiny on more detailed state spending information.

3.1.2 State Government Performance

Consistent with the political science literature, I capture state government performance across two constructs: expenditure efficiency and expenditure responsiveness. I measure a state government's spending efficiency in two ways: *Expenditure as % of GDP* and *Expenditure per Capita*. Government spending efficiency has been measured in a number of ways depending upon the study and the data available. The focus though of these measure, as discussed previously, is governmental services of a given quality in the least-cost manner. In the public

policy and political science literatures, measures are usually based around a socio-economic indicator that is presumed to be the target of government spending (infant mortality, elementary education enrollment rates, etc.). However, these measures do not address overall government spending, but only highly specific areas of spending.

I therefore follow Hauner and Kyobe (2008) who note the limitations of such measures and test a multitude of measures of government quality and output utilizing a large cross-country panel dataset. Their research finds that higher expenditure relative to GDP is associated with lower efficiency across sectors. I therefore, utilize *Expenditure as % of GDP* as a measure of overall state expenditure efficiency. To avoid reliance on a single metric, I also follow Afonso and Fernandes (2007) who find that lower per-capita expenditure levels (*Expenditure per Capita)* are associated with more efficient governments. These two measures relate government expenditure to measures of state fiscal health and wealth, a way to measure "bang for buck" of state expenditure.[20] I collect data on state expenditures and populations from the U.S. Census Bureau Survey of the States and the Urban Institute. Data on GDP come from the Bureau of Economic Analysis.

To measure responsiveness, I split state spending allocations between issues of high priority to the majority of voters and those that are not. I measure expenditure allocation as the ratio of state spending by service area to total direct expenditure. The separation of state spending by service is done in accordance with the government spending categories defined by the U.S. Census Bureau (education, healthcare, pension management, etc.).[21] These ratios

[20] A limitation to these aggregated measures is that individual states may provide different services and that using an overall expenditure figure loses some of that variation.
[21] There are variations in state spending categories, but I opt for the six-category method from the Census Bureau. The U.S. Census Bureau conducts an annual survey to capture comprehensive state and local government financial

capture how each state allocates funds amongst government activities each year. Data on service-level spending is collected from the Urban Institute.[22] To operationalize voter priorities, I hand-collected annual polls by the Pew Research Group which ask individuals to identify which government issues are a high priority for them each year. Areas identified as "top priority" by more than 50% of voters polled are identified that year as a *High Priority*, a binary indicator variable. While the polls are not specific to state government, the issues polled do directly line up with the categories of state spending. Polls are not identified by geography, but are split by the political affiliation of the individual polled.

Finally, in consideration of pitfalls, I use three measures of state solvency to proxy for long-term success. The first two measures are collected from annual assessments of state fiscal health performed by the Mercatus Center: *Net Asset Ratio* and *Long-Term Liability Ratio*. To measure the impact of unfunded pension liabilities, I utilize a report by Truth in Accounting (TIA) that considers whether a state can cover all of its liabilities, including unfunded pension liabilities. The measure breaks down what the per capita surplus or deficit of all state level obligations would be at the close of each fiscal year, captured as *TIA Surplus per Capita*.

3.1.3 Controls and Other Measures

While states engage in the same revenue and expenditure generating activities, there are still differences amongst the states that may influence my measures of performance. Data on state characteristics are pulled from the U.S. Census Bureau, the PEW Research Center, The

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data. Data on revenue and expenditures are captured at a more granular level that using uniform definitions and procedures. This more granular data is then rolled up into the larger spending categories, making the manipulation of spending categories difficult.

[22] Urban Institute data is compiled from the U.S. Census Bureau.

National Association of State Budget Offices (NASBO), the Mercatus Center, and the Urban Institute. Governor political affiliation data are hand collected from state election records. Further details on all of the above discussed measures can be found in Appendix A.

3.2 Descriptive Statistics

Table 1 reports descriptive statistics for the main sample. The sample covers all fifty states over the period 2006-2016 in Panel A and 2010-2016 in Panel B. The varying sample lengths allow for greater variation in the binary *Implemented* variable as opposed to limiting to only the years with PIRG data availability. There is variation in the asset endowment, population, and personal income levels of the states, with the tails being relatively widespread. "Larger" states like California, Texas, and New York consistently fall at the maximum values across the board, while "smaller" states like Vermont, Wyoming, and the Dakotas often fall at the low ends.

However, the same is not true for measures of efficiency and expenditure ratios which display greater variation within the states over time. For the 2010-2016 (2006-2016) sample, the mean *Expenditure as a Percentage of GDP* is 13.72% (13.44%). *Expenditure per Capita* ranges from $4,109 ($3,710) at the low end up to $17,631 ($17,631) at the high end. While some states fall consistently at the tails of these distributions, it is not consistent across measures. For example, Alaska often falls at the low ends of efficiency measures, but the tails for these measures is not consistently only the "smallest" states.

The ratio of specific expenditure categories to total general expenditure ranges across states. However, education and public assistance spending consistently fall at the top of the spending priority list with averages of 19.07% (19.33%) and 30.44% (29.73%) of total general spending, respectively. At the other end are spending on public safety with an average of 3.034%

(3.975%) of general spending and public works and housing spending with 3.754% (3.207%) of general spending.

Transparency also ranges for the available sample. While 94.9% of state years have a transparency initiative in the 2010-2016 sample, that drops to 70.18% in the larger sample from 2006-2016. It is the variation in the assessed effort of these initiatives presented in Panel B of Table 1 that has the greater variation. States are assessed as *Leading* 42.3% of the time and *Middling* 43.7% of the time.

Table 2 includes detail on the breakdown of how states are categorized across the years between the *Leading*, *Middling*, and *Lagging* categories, as well as the year that the state initiated transparency efforts. Some states consistently fall in the *Leading* category, such as Kentucky and Texas. Others fall frequently in the *Lagging* category such as Idaho, one of the last states to implement a transparency website. States that fall into multiple categories do not always follow a monotonic path through the categories. For example, Hawaii mainly falls into the *Middling* category, but fell into the *Lagging* category in 2013 due to outdated information systems.

Table 3 summarizes voter priorities. Panel A captures preferences for the period 2006-2016, while Panel B is 2010-2016. Voter priorities are matched to their relevant state expenditure category and broken down by political party as well. Education and Healthcare are both consistently a "Top Priority" to voters.

Chapter 4 Research Design and Empirical Results

4.1 Transparency and Efficiency

To assess the relation of transparency and efficiency, I examine the relation between state transparency effort and expenditure efficiency using the following regression:

$$Efficiency_{it} = \alpha + \beta\, Transparency_{i,t} + \delta\, X_{i,t} + h_{j,t} + \varepsilon_{j,t} \quad (1)$$

where the dependent variable, $Efficiency_{it}$, is one of the two efficiency measures previously identified in Section 3 for state *i* in year *t*: *Expenditure as % of GDP* or *Expenditure per Capita*. The independent variable of interest is $Transparency_{i,t}$, which captures: the binary measure *Implemented*, the continuous measure *PIRG Score*, or categorical variables that partition transparency initiatives into *Leading* [PIRG Score of 80 to 100] and *Middling* [PIRG Score of 50 to 79].

A vector of state level controls are represented by $X_{i,t}$. *Total Assets* captures the assets of the state for that year and *Population* is the state's total population in a given year. *Personal Income* captures the total income of state residents and is a measure of the economic well-being of a state's residents. *Republican* is an indicator as to whether the current governor in a state is a Republican or not. *Over 65* and *School Aged* capture the ratio of the state's population that are 65 years old or older and aged five to eighteen, respectively. Finally, *Poverty* captures what portion of the state falls at or below the poverty line. In addition, $h_{j,t}$ captures Bureau of Economic

Analysis (BEA) region-year fixed effects to address concerns about regional shocks or time trends.[23] Standard errors are also clustered by BEA region and year.

Table 4 presents the regression results for Equation (1) examining if states that engage in transparency experience higher levels of efficiency. The coefficient of interest is β. A negative β coefficient (i.e., a lower level of expenditure to achieve the same level of GDP or lower expenditure per capita) indicates greater efficiency in states with transparency initiatives or greater transparency effort. The results in Table 4 suggest that only those states that excel in their transparency efforts exhibit greater levels of efficiency.

The coefficient on *Implemented* in columns (1) and (4) is negative, but not significant. This result indicates that the existence of a transparency initiative alone does not impact state expenditure efficiency. The coefficients on *PIRG Score* in columns (2) and (5) indicate that states with greater levels of transparency also have greater levels of efficiency. A one point increase in *PIRG Score* is associated with a 2.67 basis points decrease in *Expenditure as % of GDP*. To achieve a 2.67 basis point decrease in *Expenditure as % of GDP*, a state at the mean of my sample would have to decrease spending by over $10.8M or increase GDP by $578.7M to achieve that result, or some combination there between. A one point increase in *PIRG Score* is significantly associated with a $17.05 decrease in *Expenditure per Capita*. These results indicated that more transparent states are incrementally more efficient.

Instead of measuring transparency as a dichotomous or continuous variable, in columns (3) and (6) I use the categorical measures of transparency, *Leading* and *Middling*. The negative and significant coefficients on *Leading* suggest that, relative to failing states [a score below 50

[23] There are seven total BEA regions: New England, the Mideast, the Southeast, the Great Lakes, the Plains, Rocky Mountain, the Southwest, and the Far West.

out of 100], those states assessed as the most transparent have greater levels of efficiency. *Middling* is also negative for both measures of efficiency, but only significant for *Expenditure per Capita*. These results suggest there is a degree of monotonicity and that my results are primarily driven by *Leading* states.

Overall, Table 4 supports that increased levels of transparency are associated with better efficiency outcomes, but that there is some minimum level of effort required to see these benefits.

4.2 Transparency and Responsiveness

To assess the relation of transparency and responsiveness, I examine the relation between state transparency effort and expenditure responsiveness using the following regression:

$$Expenditure\_Responsiveness_{c,i,t} = \alpha + \beta\, Transparency_{i,t} + \delta\, X_{i,t} + h_{c,j,t} + \varepsilon_{j,t} \quad (2)$$

where the dependent variable, $Expenditure\_Responsiveness_{c,i,t}$, is the share each area of state spending, *c*, is allocated as a percent of general direct expenditure identified for state *i* in year *t*. State spending is split into six major areas of spending: *Education*, *Public Assistance*, *Healthcare*, *Public Safety*, *Transportation*, and *Public Works & Housing*. Equation (2) is estimated using a pooled sample with 6 observations per state year. To assess responsiveness, I partition the sample between spending areas of high and low priority. By allowing an observation per spending category per state-year, each area of spending can be considered in comparison to its *Priority* to voters. See details on voter priorities in Table 3.

A vector of state level controls are again represented by $X_{i,t}$. In this specification, $h_{c,j,t}$ captures fixed effects by spending category within Bureau of Economic Analysis (BEA) region-years. By using fixed effects at the category-region-year level, I can assess how abnormal levels

of a category within a region year are associated with transparency variation. Standard errors are again clustered by BEA region and year.

Table 5 presents the regression results for Equation (2) examining if states with greater transparency effort are associated with expenditure allocation that is more responsive to voter priorities. The coefficient of interest is β. A positive (negative) β coefficient indicates transparent states allocate more (less) of their expenditures to spending categories. Spending categories of high priority are presented in columns (1) through (3), while those of low priority are presented in columns (4) through (6). The results in Table 5 suggest that those states that excel in their transparency efforts exhibit both greater expenditure allocation to areas of high priority to voters, but also less allocation to areas of low priority to voters.

The coefficient on *Implemented* in columns (1) and (4) are not significant, indicating that the existence of a transparency initiative is not significantly associated with my measure of responsiveness. The coefficients on *PIRG Score* in column (2) and (5) indicate that states with greater levels of transparency allocate more of their total expenditures to areas of high priority and less to areas of low priority than less transparent states. A one point increase in *PIRG Score* is associated with a 1.01 basis point increase in spending allocated to high priority categories and a 1.19 basis point decrease in the proportion of low priority spending. At the mean, this implies spending $3.1M more on areas of high priority and $3.7M less on low priority areas.

Results for the categorical measures of transparency, *Leading* and *Middling* are comparable, with leading states displaying the greatest (lowest) allocation of spending to areas of high (low) priority. The positive and significant coefficients on *Leading* suggest that, relative to failing states, those states assessed as the most transparent allocate more (less) of general expenditure to those areas of highest (lowest) priority to voters. *Middling* is also positive

(negative) and significant for spending categories of high (low) priority. These results again suggest that there is a degree of monotonicity; Leading states allocate 0.814% more of general expenditures to areas of high priority compared to non-passing states, a difference of $252M at the sample mean.

In Table 6, I disaggregate expenditure allocations to show where and how state spending allocation varies by category. Areas that are more consistently low priority according to PEW polls are included in Panel A, while Panel B includes areas that are more frequently identified as high priority (high and low priority areas are described in Table 3). The results in Panel A suggest that more transparent states allocate less of their expenditures to areas of low priority. This is especially true for *Transportation* spending, which is never designated as high priority, and *Public Works and Housing* spending, which is only identified as high priority once between 2010 and 2016. The results in Panel B are more mixed. In Columns (1) through (3), the coefficient for *Healthcare* is positive and significant, but the coefficients on *Education* and *Public Assistance* are negative or insignificant.

An important caveat related to my measures of responsiveness is that PEW polls are measured at a national level. It could be that any given individual state (or party within a state) varies from national priorities and therefore my results may be subject to some measurement bias. I am unable to gather polls at the state level for all states, especially in a way that could be converted to a consistent designation of priorities. The national polls do take into consideration voters from across the country and therefore should overall capture voter priorities.

Overall, Tables 5 and 6 combined support that increased levels of transparency are associated with better expenditure responsiveness.

4.3 Transparency and Selective Responsiveness

To assess the relation of transparency and selective responsiveness, I first examine the relation between state transparency effort and selective expenditure responsiveness by again using Equation (2) from above. To assess whether more transparent states are more responsive to only select voters, I partition my sample based on voter priorities by political party (as opposed to the voter consensus priorities used in Table 5 discussed above). Using the political party of the governor in state *i* and year *t* as a proxy for the political majority in the state, I separate the sample to test the difference in allocation in comparison to "own party priorities" (i.e., Democrat led states and Democrat voter priorities) and "other party priorities" (i.e., Democrat led states and Republican voter priorities). See details on voter priorities in Table 3.

Table 7 presents the regression results for Equation (2) examining if states with greater transparency effort are associated with expenditure allocation more responsive to selective voter priorities. Panel A details the responsiveness of states to the priorities of voters of the same party as the current governor, while Panel B presents responsiveness to the priorities of voters from the opposing party.[24] Evidence of selective responsiveness would be noted in the differences between β when considering the priorities of the perceived majority of voters (one's own party) versus the minority (the opposing party). The results in Table 7 suggest that transparent states exhibit greater responsiveness to their own voters.[25]

The coefficient on *Implemented* in columns (1) and (4) are not significant in both panels, indicating that the existence of a transparency initiative is not significantly associated with my

[24] While states can vary in partisanship, I opt to use the political party of the Governor as an indicator of the political lean of the state during that time period.
[25] Note that the priorities of Republicans and Democrats are not mutually exclusive, with some areas consistently high or low priority for both groups.

measure of responsiveness. The coefficients on *PIRG Score* in column (2) and (5) are only significant for the priorities of opposing parties in Panel B, showing that there is some attentiveness to priorities outside of the perceived voting majority.

Results for the categorical measures of transparency, *Leading* and *Middling* suggest that leading states display the greatest allocation of spending to areas of high own-party priority. The positive and significant coefficients on *Leading* suggest that, relative to failing states, those states assessed as the most transparent allocate more of general expenditure to those areas of highest priority to perceived majority voters. *Middling* is also positive (negative) and significant for spending categories of high (low) priority.

While the results in Table 7 give some evidence of selective responsiveness, it is difficult to completely separate out voter priorities as they can often overlap. For example, education is a consistently high priority for both Republicans and Democrats across the sample period. Therefore, I consider an alternative approach to considering selective responsiveness. As noted earlier, there is literature suggesting that transparency motivates short-termism or "you-get-what-you-measure" phenomena if decision-makers are accountable for their more visible and transparent actions but not for the performance consequences of all their decisions. In this spirit, I use solvency measures as leading indicators of the adverse consequences of short-termism and selective accountability. In particular, I estimate the following regression:

$$Solvency_{i,t} = \alpha + \beta\, Transparency_{i,t} + \delta\, X_{i,t} + h_{j,t} + \varepsilon_{j,t} \qquad (3)$$

where $Solvency_{it}$ is one of three measures previously identified in the public policy literature for state *i* in year *t*: *Net Asset Ratio*, *Long-Term Liability Ratio*, and *TIA Surplus per Capita*. The independent variable of interest, $Transparency_{i,t}$, the vector of state level controls, $X_{i,t}$, and the BEA region-year fixed effects, $h_{j,t}$, are unchanged from previous regressions.

Table 8 presents the regression results for Equation (3) examining if states that engage in transparency experience lower levels of solvency. The coefficient of interest is β. A negative β coefficient (i.e., a greater proportion of long-term liabilities to total assets) indicates greater solvency for *Long-Term Liability Ratio*. A positive β coefficient (i.e., a greater proportion of net assets to total assets or a higher surplus) indicates greater solvency for *Net Asset Ratio* and *TIA Surplus per Capita*.

The coefficient on *Implemented* in columns (1), (4), and (7) are all negative, but only significant for the measure of *TIA Surplus per Capita.* This result indicates that the existence of a transparency initiative is insufficient to impact state solvency. The coefficients on *PIRG Score* in columns (2), (5), and (8) indicate that states with greater levels of transparency also have lower levels of solvency. Similar to measures of efficiency, the movement in ratios are in basis points, but these changes are still linked to economically significant amounts given the size of state balance sheets. For example, the -0.0032 decrease in net asset ratio associated with a one point change in *PIRG Score* would require nearly a $139.6M reduction in net assets holding total assets constant at the mean. Similarly, each point increase in transparency is associated with a $134.40 reduction in the state surplus per capita.

Results for the categorical measures of transparency, *Leading* and *Middling*, are presented in columns (3), (6), and (9). The significant coefficients on *Leading* for all three measures of solvency suggest that, relative to failing states, those states assessed as the most transparent have the lowest levels of solvency. *Middling* is also associated with worse solvency for all three measures, but only significant for *TIA Surplus per Capita*. For example, column (9) shows evidence that a *Leading* state is associated with an additional $8,009 of deficit per citizen compared to those states with less than passing levels of transparency. *Middling* states also fair

worse on deficit per capita, with an additional $5,509 of deficit compared to states below passing effort.

Overall, Tables 7 and 8 support that increased levels of transparency are associated with selective responsiveness.

4.4 Main Sample Robustness

In addition to the main specifications discussed above, I address other possible concerns with additional tests on my main state government sample.

4.4.1 Changes Specification

State policy decisions, including those related to transparency initiatives, are not made in a vacuum. While each state may have a different triggering event or motivation for the implementation of a transparency program, there is the potential that transparency efforts are related to the underlying economics of the states or capture some other state characteristic. I therefore reassess Equations 1 through 3 using a changes specification. Changes in transparency are captured as the percent change in *PIRG Score* from year *t-1* to year *t* (*% Change in PIRG Score)*, as well as the interaction of this change and the state being a leading state (*% Change in PIRG Score*Leading*).

A vector of state level controls are represented by $\Delta X_{i,t}$. *Δ Total Assets* captures the change in total assets of the state and *Δ Population* is the change in the state's total population in a given year. *ΔPersonal Income* captures the change in income of state residents and is a measure of the economic well-being of a state's residents. Where the interaction term *% Change in PIRG Score*Leading* is tested, *Leading* and *% Change in PIRG Score* are included in the controls.

Table 9 presents the results of this alternative change-based approach. Panel A includes results for changes in measures of efficiency, as well as tests of responsiveness. The results

indicate that changes in PIRG score are significantly associated with changes in expenditure efficiency, more consistently for *Leading* states. Column (6) shows evidence that responsiveness is also consistent in the changes regression, but only for reductions in low priority spending.

Panel B includes results for selective responsiveness. Similar to responsiveness tested in Panel A, a change in PIRG score is shown in columns (1) and (2) to only be associated with reductions in spending on low priority categories for the opposing party. Columns (5) and (6) show results for changes in solvency measures. In untabulated results, the association between changes in transparency and changes in solvency are not significant for *Changes in Net Asset Ratio* and *Changes in TIA Surplus per Capita.*

Overall, Table 9 presents evidence that states with increasing levels of transparency enjoy increased expenditure efficiency and increased responsiveness, and show some evidence of selective responsiveness.

4.4.2 Alternative Measure of State Performance

A key assumption throughout the paper is that I have appropriately identified measures of state performance: efficiency and responsiveness. I therefore consider an alternative measure of state performance: stewardship. The use of stewardship, in lieu of overall performance, allows for a more targeted focus on the management of resources as opposed to the actual allocation of resources. Following Cuny et al (2020), I use audit outcomes as a measure of stewardship, though limiting my measures to the presence of unmodified audit opinions, material weaknesses, and significant deficiencies. To assess this alternative performance measure, I use the following regression:

$$Stewardship_{it} = \alpha + \beta\, Transparency_{i,t} + \delta\, X_{i,t} + h_{j,t} + \varepsilon_{j,t} \qquad (4)$$

where $Stewardship_{it}$ is one of the three audit outcome listed above. $Transparency_{i,t}$, again captures one of three types of transparency measures for state *i* in year *t*. A vector of state level controls are again represented by $X_{i,t}$. *Total Assets* captures the assets of the state for that year, *Population* is the state's total population in a given year, and *Personal Income* captures the total income of state residents and is a measure of the economic well-being of a state's residents. *Republican* is an indicator as to whether the current governor in a state is a Republican or not. State population demographic controls are not included as there is no expenditure allocation to consider.

Table 10 presents the regression results for Equation (4) examining if states that engage in transparency experience higher levels of stewardship. Results are only significant for unmodified opinions, with increased transparency significantly associated with the occurrence of an unmodified audit opinion. In untabulated results, *Passing* states do exhibit a significantly negative association with the occurrence of material weaknesses. Additionally, when run in an untabulated logit model, being a leading state is still significantly positively associated with the likelihood of receiving an unmodified opinion, as well as significantly negatively associated with the likelihood of receiving a reportable condition or material weakness. Overall, Table 10 presents some evidence that transparency initiative efforts are positively associated with increased stewardship.

4.4.3 Reverse Causality

A key consideration in my study is that states select into being transparent and with that there is the concern of selection bias, and more specifically in my study, the issue of reverse causality. A concern is that a more efficient or responsive state could opt to be more transparent in hopes of some positive benefit from voters becoming more aware of this efficiency or

responsiveness. As the decision to implement or improve transparency initiatives are not costless, it is fair to assume that states have some expectation of future benefits from these efforts. The issue is whether that expectation of benefit is dependent on the state's existing level of efficiency or responsiveness. In other words, do states only expect the benefit (and therefore only implement) if they are independently efficient or responsive before deciding to be transparent?

To address this concern I first consider the nature of the state government setting. Each of the fifty states chose to implement a transparency initiative, with the majority [36 out of 50 states] implementing between 2008 and 2010. While there is likely some contagion between states from witnessing other states' successful transparency initiatives, the most frequently cited motivation for state transparency initiatives is the federal equivalents passed in 2006 and 2008. The Federal Funding Accountability and Transparency Act of 2006 (FFATA) and the follow-up Strengthening Transparency and Accountability in Federal Spending Act of 2008 were bipartisan, sponsored by then Senators Tom Coburn, Barack Obama, Tom Carper, and John McCain. Unanimously passed, the federal legislation was focused on the importance of informing taxpayers of where their tax dollars were being used.

States were likely also influenced by the economic crisis and the passage of the American Recovery and Reinvestment Act (ARRA) of 2009, which required states to track federal stimulus funds. Nearly all of state transparency initiatives were implemented after the introduction of the FFATA [49 out of 50 states implemented after April of 2006], with the majority falling between 2008 and 2010 [36 out of 50 states] as the ARRA was implemented. Taken together, these

national events at least anecdotally suggest that state level transparency initiatives were influenced by federal transparency efforts.[26]

The influence of federal transparency efforts may alleviate some concern that being efficient or responsive is what leads states to implement a transparency initiative. However, the existence of federal influences does not completely address the level of transparency effort made by each state. It may be that more efficient or responsive states are more incentivized to be transparent to better display their superior performance. Or possibly that more efficient states are better equipped to be more transparent due to improved systems or processes. It would follow then that more efficient or responsive states implementing a transparency initiative should exhibit higher transparency scores in their first year of transparency efforts compared to those that are less efficient or responsive.

However, there is not a significant correlation between *PIRG Score* and *Lagged Efficiency* in the year of transparency initiative implementation. There is a positive correlation of 0.1672 with a p-value of 0.5073 in the first year of implementation between *PIRG Score* and *Lagged Efficiency*.[27] This result implies that a state with worse efficiency [a higher expenditure per GDP] is correlated, albeit not significantly, with a higher first year transparency score. I do not find evidence that more efficient states are more transparent when first implementing a transparency initiative.

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[26] Further, state efforts were largely bipartisan supported. I hand check the method by which each state implemented its transparency initiatives and did not note any overt political motivation behind proposed transparency efforts. This largely bipartisan support alleviates concerns that any concentrated political views may impact state performance.
[27] *Lagged efficiency* is used to avoid any effects of the transparency effort in the first year, as well as to capture any anticipatory action. Results are also consistent and insignificant when using *Efficiency* in time *t*.

A limitation to this correlation check is that the sample only has transparency scores from 2010 forward, limiting how many of the fifty states had an implementation year of 2010 or later. I therefore also test whether more efficient states are more likely to implement transparency initiatives earlier. There is a positive and insignificant correlation between efficiency and implementation year, which would mean a state with worse efficiency is correlated, albeit not significantly, with a later transparency implementation. Further, in untabulated results, I estimate a logistic regression to see if *Lagged Efficiency* is a determinant of implementation year. I find that prior year efficiency is not a significant determinant of implementation year across the larger 2006-2016 sample. This is true using a continuous measure of efficiency as well as indicator variables for being above the sample mean, 75th percentile, and 90th percentile in a given year.[28] Taken together with the above correlations in the smaller sample, these insignificant correlations and results give some reassurance that it is not simply that more efficient states are opting to be more transparent.

The above helps to address the concern that already efficient states are driving my results. However, it could still be that states with existing solvency concerns are more likely to be transparent. If a state has or is developing issues with solvency, it could be that the state chooses to disclose more due to some concern of being punished by voters for negative news, congruent with the idea in private markets that firms voluntarily disclose bad news (Skinner 1994). To alleviate this concern, I follow a similar process to the tests discussed above, but using measures of solvency instead of efficiency. I do not find a significant correlation between *Lagged Solvency* and *PIRG Score* in initiation year, nor a significant correlation between *Lagged Solvency* and

[28] In addition, results hold whether efficiency measures are run alone or with a variety of control variables.

initiation year. I also do not find that *Lagged Solvency* is a significant determinant of initiation year. These insignificant correlations and results give some reassurance that my results are not driven by less solvent states opting to be more transparent.

It is difficult to fully address the issue of reverse causality further within my research design given the nature of the setting. It would be ideal to have some exogenous variation in transparency levels to assess how state performance varies in response. However, as transparency efforts are decided upon by the individual states, this type of exogenous variation is not plausible in my setting. Another possibility would be some identifiable exogenous variation in efficiency or responsiveness to see if states then respond by adjusting their transparency efforts, thereby confirming concerns of reverse causality. However, I was unable to identify such a true shock to either efficiency or responsiveness in my time period.[29]

The final consideration then is whether the concern of reverse causality takes away from the interest of the relation between transparency and state performance. The motivation of this study is that greater state government spending transparency fosters more public accountability. The appeal of this relation is that taxpayers want to know how their money is being spent and increased transparency not only gives the public the ability to monitor government, but also the act of being more transparent is associated with improved performance. Whether more transparent states are more efficient or more efficient states are more transparent, it is still possible for taxpayers to identify those higher performing states. Further, if the public were to push governments resistant to improving transparency, then those opting to hide poorer

[29] The COVID-19 pandemic would arguably be such a shock as state budgets were greatly affected unexpectedly in 2020, but transparency effects are not yet visible. I also considered possible natural disasters that would negatively impact state expenditures or exports and therefore would be likely to negatively impact at least efficiency. Such incidents I was able to identify did not have a significant impact on efficiency.

performance with opacity would be exposed. Overall, my results provide evidence that states with greater transparency are higher performers with respect to efficiency and responsiveness.

Chapter 5 Alternative Sample and Setting

To address concerns about the viability of the PIRG based transparency measures, as well as the size of the state-based sample, I use an alternative sample as a robustness check of my results. The Sunshine Review was a budget and fiscal transparency initiative from 2009-2012 that worked to assess county level transparency websites. The non-profit assessed every county's transparency efforts in the United States in 2009 and performed a follow up of the five largest counties in each state in 2012. The assessment was a simple checklist of whether counties made specific information available online to the public (budget information, financial meeting minutes, audit information, tax information, etc.). Based on the availability and completeness of the information, each county was assessed a grade between A+ and F.

I hand collect the results of these county level assessments from web archives of the Sunshine Review.[30] I split counties into levels similar to those used for the state sample: *Leading* for counties who receive a B or higher and *Passing* for counties who receive a C or higher. I calculate *SR Score* as the GPA conversion of the letter grades assessed by the Sunshine Review. I do not include a binary measure as there is not enough detail to assess the difference between counties with no transparency efforts and those that simply fail in their efforts.

[30] I use the tool web.archive.org as the Sunshine Review was acquired by Ballotpedia in 2014 and the original website was dismantled. Ballotpedia has a copy of the Sunshine Review outcomes, but I found that this version is incomplete for all counties.

County level financial data can be difficult to acquire and is often inconsistent in its availability, limiting my ability to replicate all of the tests done for the state-level sample. However, the Federal Audit Clearinghouse makes available county level audit data, as well as the extent of federal grant expenditures by counties. Combined with county level GDP data from the BEA, I am able to assess expenditure efficiency and stewardship at the county level.

Table 11 includes the summary statistics for this alternate sample. The sample is limited to counties where both an audit report was available from the Audit Clearinghouse and an assessment was performed by the Sunshine Review in 2009.

To reassess the relation of transparency and efficiency in this alternate sample, I use the following regression:

$$Efficiency_{it} = \alpha + \beta\, Transparency_{i,t} + g_s + h_t + \varepsilon_{s,t} \quad (5)$$

where $Efficiency_{it}$ is *Federal Grant Expenditure as % of GDP*. As county level data is more limited, I assess the efficiency of federal grant expenditure per county GDP as an equivalent efficiency measure. The independent variable of interest, $Transparency_{i,t}$, captures one of two types of transparency measures for state *i* in year *t*. The first is the continuous measure *SR Score,* while the second are categorical variables that partition transparency initiatives based on efforts (*Passing* and *Leading*). As consistent county data is not available, I utilize both state fixed effects and year fixed effects to help control for county characteristics. While this likely throws out some of the proverbial baby with the bathwater (a significant concern in my state sample) the increased sample size offered at the county level likely alleviates this concern.

Table 12 presents the regression results for Equation (5) examining if counties that engage in transparency experience higher levels of efficiency. The results suggest that more transparent counties are more efficient in their federal grant expenditure, consistent with the

state-level results. Column (1) and (2) show that being a *Leading* or *Passing* county is associated with a 0.370 or 0.304 percentage point improvement in expenditure efficiency. As the mean federal grant expenditure efficiency is 0.6285% for the sample of counties, these differences would mean an economically significant change in expenditure or GDP.

In addition to efficiency, I also assess how transparency at the county level impacts stewardship as captured by county level audit outcomes. I use the following regression:

$$Stewardship_{it} = \alpha + \beta\, Transparency_{i,t} + g_s + h_t + \varepsilon_{s,t} \quad (6)$$

where $Stewardship_{it}$ is one of three audit outcomes. The controls and fixed effects follow those detailed in Equation (5) above. The results are presented in Table 13. I report a positive and significant relation between three measures of transparency effort and the occurrence of an unmodified opinion, as evidenced in columns (1) through (3). Higher levels of transparency effort are also negatively and significantly associated with the likelihood of significant deficiencies and material weaknesses as shown in columns (4) through (6) and (7) through (9), respectively. These results are arguably stronger than those of the equivalent state-sample. The stronger results are likely influenced by the greater variation in county level audit procedures and resulting outcomes, as well as the larger sample.

The collective evidence in Tables 12 and 13 suggest that more transparent counties are more efficient in their federal grant expenditure and display greater stewardship, in line with results from the main state sample that increased transparency is associated with improved measures of state performance. Data on county level solvency is not available, making it difficult to assess the potential pitfalls of transparency in this county setting.

Chapter 6 Conclusion

The rising popularity of transparency as a tool for good governance is predicated on the promise of increased accountability, and with that improved performance. Using spending transparency initiatives implemented by state governments over the last decade, I find evidence of transparency's promise for state performance. In particular, I find that transparent states are (1) more efficient with expenditures in the sense that they spend less per capita and as a percentage of GDP, and (2) more responsive to voters in the sense that their expenditures are allocated more towards voter priorities.

However, transparency is not without pitfalls. Increased focus on measured outputs, immediate constituent needs, or the priorities of the most vocal voters has consequences. For instance, I find that transparent states' responsiveness is selective, based on party affiliation (e.g., Democrat-led states are more responsive to Democratic voter priorities). I also find that transparent states have lower net asset ratios, higher long-term liability ratios, and are less able to cover their pension obligations than their less transparent counterparts. These results suggest that transparent states forego long-term health and solvency in favor of current performance. Results for both the promise and pitfalls of transparency are robust across multiple measures of each outcome of interest, as well as an alternate county-level government setting.

Overall, my findings contribute to several literatures that analyze the importance of transparency as a tool for good governance. For instance, I contribute to the literature on the influence of disclosure on short-termism (Graham, Harvey, & Rajgopal 2005; Brochet,

Loumioti, & Serafeim 2015; Ernstberger et al. 2017) by showing transparent states shortchange long-term success even absent overt short-term stakeholders. My findings also contribute to the political science and public policy literatures concerned specifically with the effectiveness of transparency in government. Finally, my results are likely to be of interest to politicians and public servants considering the implementation or improvement of transparency initiatives, as well as the third-party groups that monitor and assess government transparency efforts.

Appendices

Appendix A Variable Definitions

	Variable	Description	Source
State Characteristics	*Total Assets (in millions)*	Total level of assets for a state in year *t*, in millions.	Urban Institute & US Census Bureau
	Population (in thousands)	Total level of population for a state in year *t*, in thousands.	Urban Institute & US Census Bureau
	Personal Income (in millions)	Total level of personal income for a state in year *t*, in millions. Personal income is the total income of the population of the state.	Urban Institute & US Census Bureau
	% School Aged	Percent of the state's population that is school aged (5-18) in year *t*.	US Census Bureau
	% 65 and Over	Percent of the state's population that is aged 65 and over in year *t*.	US Census Bureau
	% Below Poverty	Percent of the state's population that is below the poverty line in year *t*.	US Census Bureau
	Total Revenue (in millions)	Total revenue for a state in year *t*, in millions.	Urban Institute & US Census Bureau
	Total Debt (in millions)	Total level of debt for a state in year *t*, in millions.	Urban Institute & US Census Bureau
	Republican Governor	Binary variable that captures the political lean of the current serving governor in the state. A Republic governor is captured with a one (1), with Democrat or Independent governors captured as a zero (0).	Hand Collected
	GDP	Total level of GDP for a state in year *t*, in millions.	Bureau of Economic Analysis

State Expenditure	*Total Expenditure (in millions)*	Total state expenditure in year *t*, in millions.	Urban Institute & US Census Bureau
	Expenditure as % of GDP	Total state expenditure as a percent of state-level GDP in year *t*.	Calculated
	Expenditure as % of Income	Total state expenditure as a percent of state-level personal income in year *t*.	Calculated
	Expenditure per Capita	Total state expenditure over state population in year *t*.	Calculated
	Education	Total state-level spending on Education as a percent of general expenditure in year *t*.	Urban Institute & US Census Bureau
	Public Assistance	Total state-level spending on Public Assistance as a percent of general expenditure in year *t*.	Urban Institute & US Census Bureau
	Healthcare Ratio	Total state-level spending on Healthcare and Hospitals as a percent of general expenditure in year *t*.	Urban Institute & US Census Bureau
	Public Safety Ratio	Total state-level spending on Public Safety as a percent of general expenditure in year *t*.	Urban Institute & US Census Bureau
	Transportation Ratio	Total state-level spending on Transportation as a percent of general expenditure in year *t*.	Urban Institute & US Census Bureau
	Public Works & Housing Ratio	Total state-level spending on Public Works and Housing as a percent of general expenditure in year *t*.	Urban Institute & US Census Bureau
Solvency	*Net Asset Ratio*	Restricted and unrestricted net assets over total state assets in year *t*. A higher ratio indicates greater long-run solvency.	Mercatus Center
	Long-Term Liability Ratio	Long-term (noncurrent liabilities over state population in year *t*. A lower value indicates greater long-run solvency.	Mercatus Center
	TIA Surplus per Capita	Truth in Accounting calculates a measure of state surpluses and deficits based on assets available to pay bills versus accumulated bills. Assets available to pay bills are total assets less capital assets and restricted assets. Total bills include bonds, other liabilities, unfunded pension liabilities, and unfunded retiree healthcare benefits, less debt related to capital assets. The resulting difference is the assessed "true"* surplus or deficit of the state. The measure is meant to be interpreted as the state's ability to pay its bills. *"True" is the term used by TIA.	Truth in Accounting

Transparency	*Implemented*	Binary variable that captures whether a state operated a website on state spending transparency at some point during the year *t*. State initiatives are dated by locating the originating legislation or gubernatorial order that began the initiative and carbon dating the website itself to get a best estimate of when the initiative was available to users. Any discrepancies are hand-checked against local news articles and historical website name changes.	Individual state websites & Carbon Dating the Web
	PIRG Score	Score from 0 to 100 hand collected from "Following the Money" reports published by the US Public Interest Research Group & The Frontier Group. Each state is assessed on pre-defined criteria as to the state spending transparency initiatives implemented by each state. Scores are on a scale of 0 to 100 each year.	Public Interest Research Group & Frontier Group
	Leading	States who received a score of 80 or above on the PIRG report in a given year *t*.	Public Interest Research Group & Frontier Group
	Middling	States who received a score of 50-79 on the PIRG report in a given year *t*.	Public Interest Research Group & Frontier Group
	Passing	States who received a score of 50 or above on the PIRG report in a given year *t*.	Public Interest Research Group & Frontier Group
	Lagging	States who received a score of 49 or below on the PIRG report in a given year *t*. This includes states with no initiative (a score of 0 on the report).	Public Interest Research Group & Frontier Group

Appendix B: Sample State Transparency Websites

Figure 1: Alaska's spending transparency website in 2010.

Figure 2: Alaska's spending transparency website in 2016.

Note that the website is large unchanged.

Figure 3: Washington's spending transparency website in 2010.

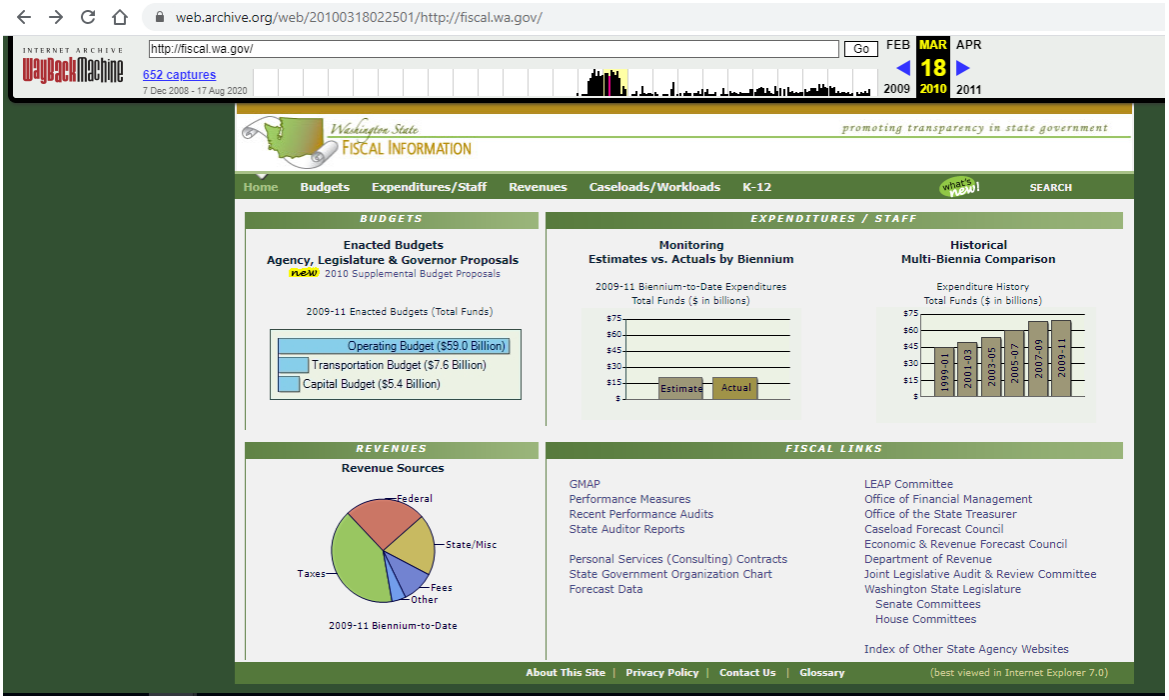

Figure 4: Washington's spending transparency website in 2016.

Between 2010 and 2016, Washington moved from posting only summarized data to a fully searchable checkbook, with the ability to look through spending by vendor or agency.

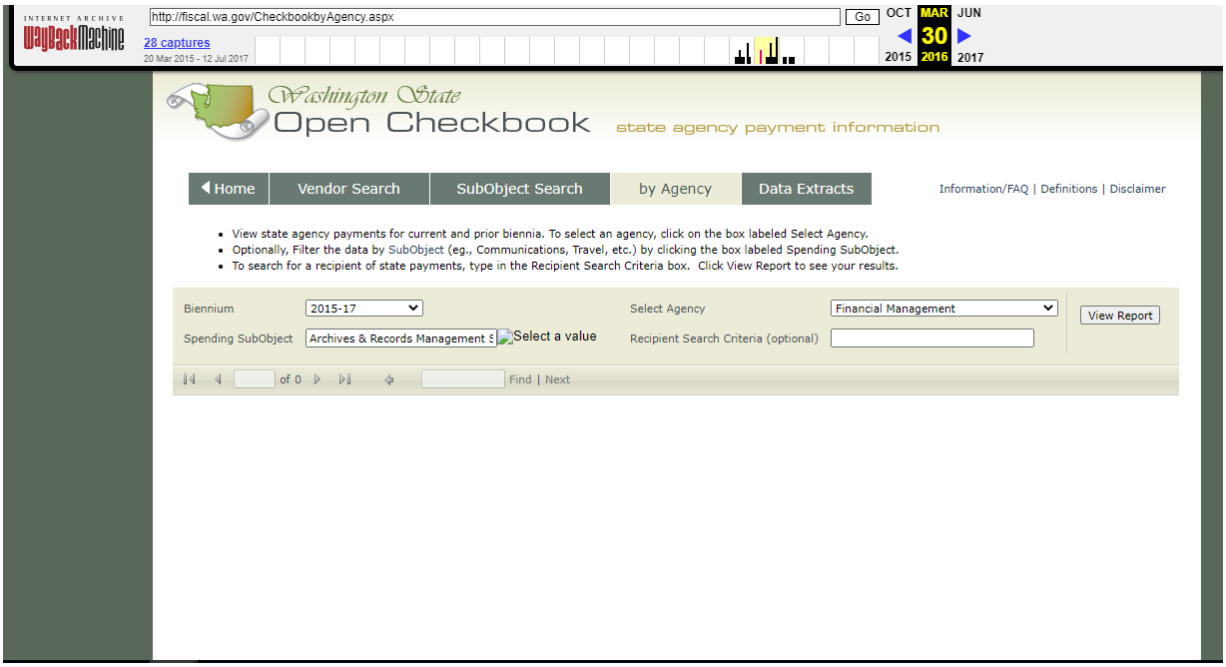

Figure 5: Iowa spending transparency website in 2012.

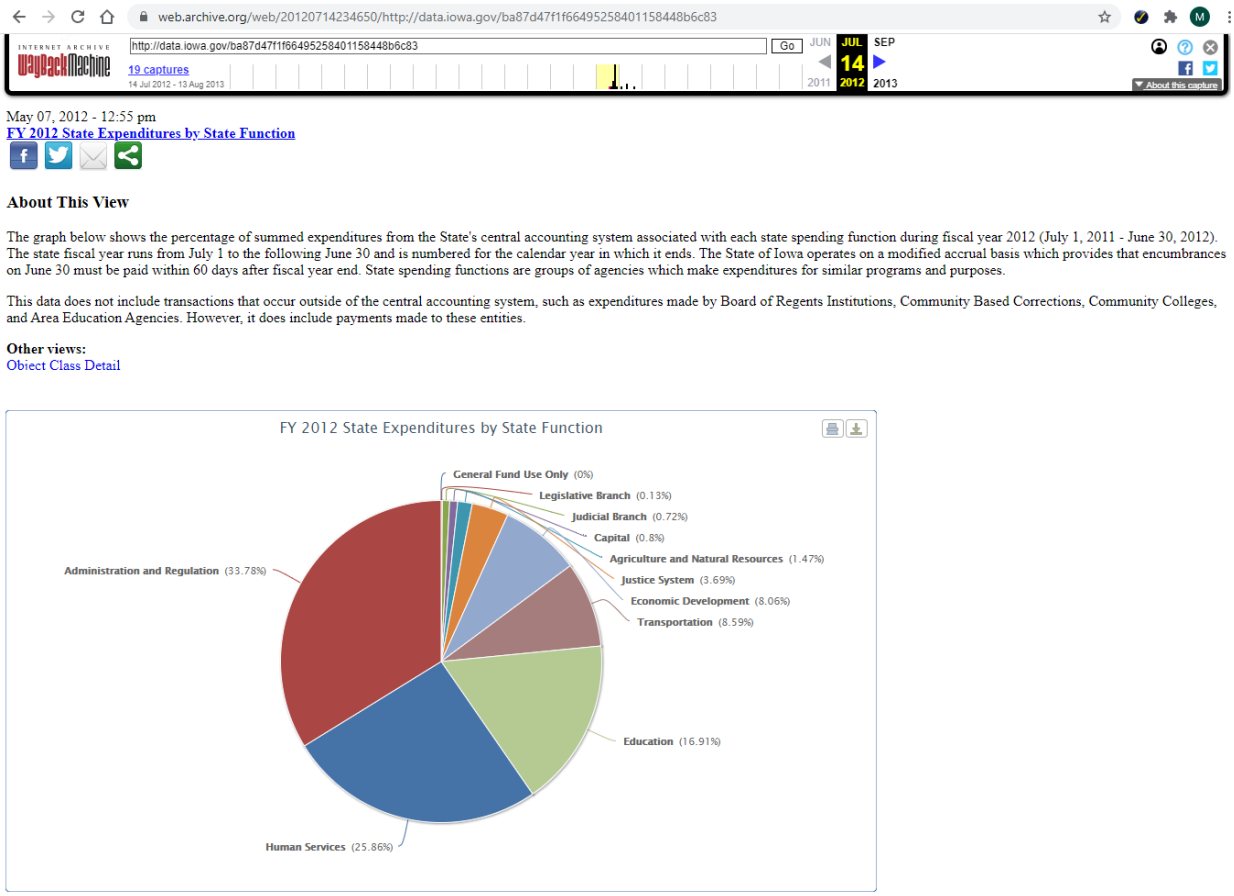

Figure 6: Iowa spending transparency website in 2020.

Note that the website was not archived properly, but the website functionality has been documented as not changing since 2016. The past looking data is indicative of what was available in that year (for example, 2012 and 2013 data is still not available). In four years, Iowa moved from only providing a pie chart of state spending by category to providing spending data for detailed search and download.

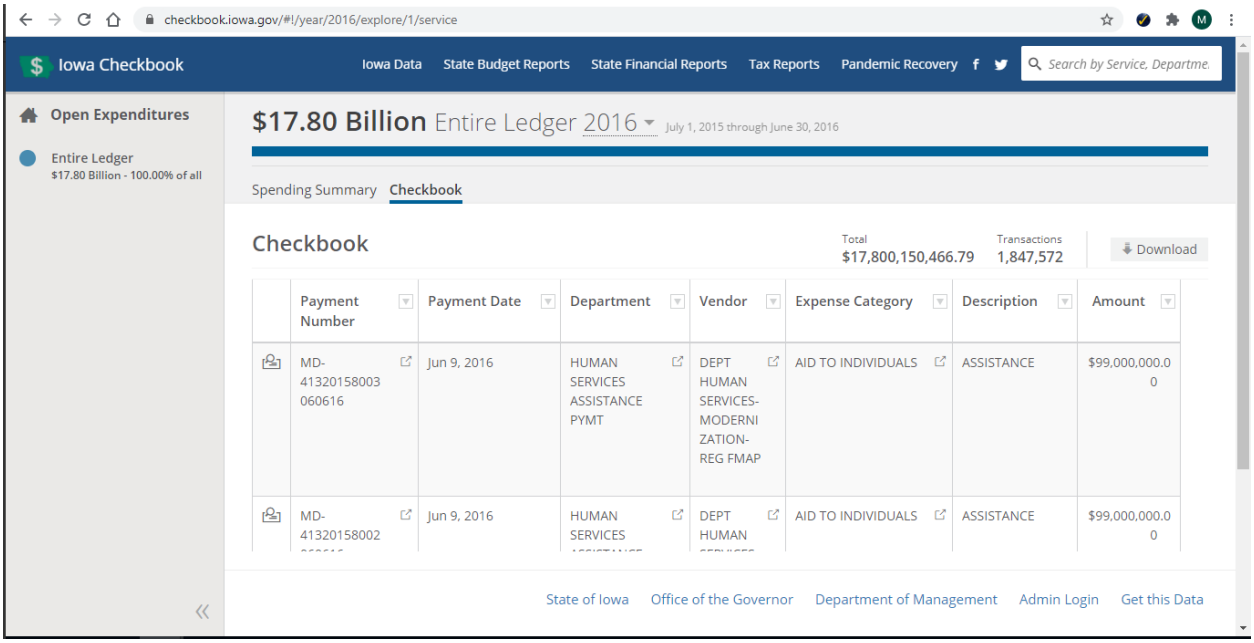

Table 1: Descriptive Statistics for State Government Sample

This table presents summary statistics for the state government sample. See Section 3 and Appendix A for discussion of variables and data sources.

Panel A: 2006-2016

	(1) N	(2) Mean	(3) Std Dev	(4) Q1	(5) Med	(6) Q3
State Characteristics:						
Total Assets (in millions)	550	42,776	47,421	18,410	30,807	42,105
Population (in thousands)	550	6,214	6,874	1,830	4,407	6,895
Personal Income (in millions)	550	287,131	340,988	70,300	177,874	375,301
School Aged	550	0.186	0.0133	0.178	0.186	0.192
65 and Over	550	0.139	0.0195	0.129	0.139	0.150
Below Poverty	350	0.1366	0.03386	0.11	0.1345	0.16
Total Revenue (in millions)	550	39,198	48,363	11,484	26,232	45,157
Total Debt (in millions)	550	21,567	28,279	5,927	11,106	24,603
Republican Governor	550	0.538	0.499	0	1	1
State Expenditure:						
Total Expenditure (in millions)	550	38,402	46,136	11,320	26,922	44,482
Expenditure as % of GDP	550	13.48	3.191	11.01	12.90	15.39
Expenditure per Capita	550	6,564	1,966	5,318	6,229	7,273
% of Exp by Category						
Education	550	19.33	4.384	15.95	19.18	22.35
Public Assistance	550	29.73	5.695	25.88	30.08	33.30
Healthcare	550	7.159	2.854	5.168	7.091	9.255
Public Safety	550	3.975	1.006	3.205	3.927	4.607
Transportation	550	7.528	2.939	5.529	7.000	8.816
Public Works & Housing	550	3.207	1.792	2.229	2.790	3.657
State Long Run Solvency:						
Net Asset Ratio	550	0.0183	0.449	-0.0500	0.0800	0.230
Long-Term Liability Ratio	550	0.400	0.453	0.170	0.280	0.460
TIA Surplus per Capita	400	-9,005	15,017	-15,200	-7,050	-2,100
State Audit Outcomes:						
Unmodified Opinion	519	0.942	0.234	1	1	1
Reportable Condition	519	0.798	0.402	1	1	1
Material Weakness	519	0.576	0.495	0	1	1
Transparency:						
Implemented Initiative	550	0.702	0.458	0	1	1

Panel B: 2010-2016

	(1) N	(2) Mean	(3) Std Dev	(4) Q1	(5) Med	(6) Q3
State Characteristics:						
Total Assets (in millions)	350	43,617	48,848	18,832	30,680	42,261
Population (in thousands)	350	6,312	7,010	1,842	4,491	6,968
Personal Income (in millions)	350	294,883	352,320	72,215	180,472	382,241
School Aged	350	0.183	0.0134	0.174	0.183	0.190
65 and Over	350	0.144	0.0188	0.135	0.145	0.155
Below Poverty	350	0.137	0.0339	0.110	0.135	0.160
Total Revenue (in millions)	350	43,076	52,332	13,418	28,954	49,886
Total Debt (in millions)	350	22,860	30,071	6,166	13,324	27,786
Republican Governor	350	0.577	0.495	0	1	1
State Expenditure:						
Total Expenditure (in millions)	350	41,030	48,937	12,360	29,067	46,238
Expenditure as % of GDP	350	13.72	3.251	11.43	13.13	15.43
Expenditure per Capita	350	6,940	2,012	5,616	6,683	7,699
% of Exp by Category						
Education	350	19.07	4.268	15.87	18.74	22.02
Public Assistance	350	30.44	5.841	26.48	30.85	34.19
Healthcare	350	7.111	2.983	4.920	6.959	9.294
Public Safety	350	3.754	0.879	3.091	3.726	4.349
Transportation	350	7.216	2.964	5.190	6.719	8.406
Public Works & Housing	350	3.034	1.552	2.091	2.680	3.597
State Long Run Solvency:						
Net Asset Ratio	350	-0.0346	0.518	-0.0900	0.0550	0.220
Long-Term Liability Ratio	350	0.453	0.525	0.190	0.330	0.510
TIA Surplus per Capita	350	-8,984	15,606	-15,400	-7,050	-1,900
State Audit Outcomes:						
Unmodified Opinion	335	0.958	0.200	1	1	1
Reportable Condition	335	0.752	0.432	1	1	1
Material Weakness	335	0.612	0.488	0	1	1
Transparency:						
Implemented Initiative	350	0.949	0.221	1	1	1
PIRG Score [Out of 100]	350	70.09	24.05	62	77	86.50
Passing State	350	0.866	0.341	1	1	1
Leading State	350	0.423	0.495	0	0	1
Middling State	350	0.437	0.497	0	0	1

Table 2: Transparency Initiative Adoption

This table details the year a new transparency initiative was implemented at each of the 50 states. Columns (2) through (4) detail what percent years 2010-2016 the state was considered a leading, middling, or lagging state according to PIRG Reporting.

State	(1) Implemented	(2) Leading	(3) Middling	(4) Lagging
Alabama	2009	0.000	1.000	0.000
Alaska	2008	0.000	0.571	0.429
Arizona	2010	0.857	0.000	0.143
Arkansas	2012	0.429	0.143	0.143
California	2009	0.000	0.429	0.571
Colorado	2009	0.429	0.571	0.000
Connecticut	2011	0.571	0.143	0.143
Delaware	2009	0.143	0.857	0.000
Florida	2009	0.571	0.429	0.000
Georgia	2008	0.000	1.000	0.000
Hawaii	2006	0.000	0.857	0.143
Idaho	2013	0.000	0.143	0.429
Illinois	2009	0.857	0.143	0.000
Indiana	2010	0.714	0.143	0.143
Iowa	2012	0.571	0.000	0.143
Kansas	2008	0.286	0.714	0.000
Kentucky	2009	1.000	0.000	0.000
Louisiana	2009	0.714	0.286	0.000
Maine	2013	0.000	0.714	0.000
Maryland	2009	0.429	0.571	0.000
Massachusetts	2011	0.857	0.000	0.000
Michigan	2010	0.714	0.143	0.143
Minnesota	2009	0.429	0.571	0.000
Mississippi	1999	0.143	0.857	0.000
Missouri	2008	0.143	0.857	0.000
Montana	2013	0.429	0.143	0.000
Nebraska	2010	0.714	0.286	0.000
Nevada	2008	0.143	0.857	0.000
New Hampshire	2010	0.143	0.571	0.286
New Jersey	2010	0.286	0.571	0.143
New Mexico	2011	0.000	1.000	0.000
New York	2008	0.571	0.429	0.000
North Carolina	2009	0.714	0.286	0.000
North Dakota	2011	0.000	0.571	0.286
Ohio	2009	0.571	0.429	0.000
Oklahoma	2007	0.571	0.429	0.000
Oregon	2010	0.857	0.143	0.000
Pennsylvania	2008	0.857	0.143	0.000
Rhode Island	2009	0.143	0.857	0.000
South Carolina	2009	0.000	1.000	0.000
South Dakota	2008	0.571	0.286	0.143
Tennessee	2009	0.429	0.571	0.000
Texas	2008	1.000	0.000	0.000
Utah	2009	0.714	0.286	0.000
Vermont	2008	0.429	0.429	0.143
Virginia	2006	0.714	0.286	0.000
Washington	2008	0.714	0.000	0.286
West Virginia	2011	0.286	0.429	0.143
Wisconsin	2010	0.429	0.286	0.286
Wyoming	2009	0.000	0.714	0.286

Table 3: Constituent Priorities by Year and Political Preference

This table details the extent to which an issue is a high priority to voters as reported in annual PEW Polls. Column (1) details the ratio of years in which over 50% of individuals polled deemed each issue as a "top priority." Columns (2) and (3) are by political party. See Section 3 and Appendix A for discussion of variables and data sources.

Panel A: 2006-2016

	(1) Majority	(2) Republican	(3) Democrat
Transportation			
Roads & Infrastructure	0.000	0.000	0.091
Public Works & Housing			
Energy Sources	0.455	0.364	0.727
Public Assistance			
Helping the Poor	0.909	0.000	1.000
Healthcare			
Healthcare Access/Cost	1.000	0.545	1.000
Education			
Education	1.000	0.818	1.000
Public Safety			
Crime	0.636	0.455	0.818

Panel B: 2010-2016

	(1) Majority	(2) Republican	(3) Democrat
Transportation			
Roads & Infrastructure	0.000	0.000	0.143
Public Works & Housing			
Energy Sources	0.143	0.143	0.571
Public Assistance			
Helping the Poor	0.857	0.000	1.000
Healthcare			
Healthcare Access/Cost	1.000	0.429	1.000
Education			
Education	1.000	0.857	1.000
Public Safety			
Crime	0.571	0.429	0.857

Table 4: Transparency and Expenditure Efficiency

This table presents results for the relation of transparency and state expenditure efficiency. Measures of efficiency include expenditure as a percent of GDP and state expenditures per capita. Transparency is captured as a binary variable (Implemented), a continuous variable from 0-100 (PIRG Score), and as categorical variables that split transparency efforts into different thresholds (Leading and Middling). Fixed effects are at the BEA region-year. Standard errors are clustered at the BEA region and year. See Section 3 and Appendix A for discussion of variables and data sources.

	(1)	(2)	(3)	(4)	(5)	(6)
	Expenditure as % of GDP			Expenditure per Capita		
Implemented	-0.143			-278.3		
	(-0.345)			(-1.594)		
PIRG Score		-0.0267***			-16.57***	
		(-3.461)			(-3.143)	
Leading			-1.946***			-1,332***
			(-2.727)			(-3.049)
Middling			-0.884			-923.8**
			(-1.287)			(-2.295)
Population	-1.155***	-1.096***	-1.102***			
	(-5.577)	(-4.775)	(-4.599)			
Total Assets	0.0479***	0.0487***	0.0495***	24.01***	24.13***	24.16***
	(7.424)	(6.334)	(6.497)	(4.636)	(4.047)	(4.064)
Personal Income	0.0133***	0.0118***	0.0119***	-4.447***	-4.576***	-4.600***
	(3.675)	(3.112)	(2.930)	(-9.699)	(-8.478)	(-8.422)
Republican	-0.0644	-0.584*	-0.625**	4.731	-103.3	-92.01
	(-0.268)	(-1.908)	(-2.080)	(0.0309)	(-0.522)	(-0.492)
Over 65	35.34**	27.08	30.19	-66,345***	-77,650***	-77,714***
	(2.369)	(1.435)	(1.525)	(-7.017)	(-6.974)	(-7.172)
School Aged	7.378	1.286	4.276	-79,934***	-95,180***	-95,970***
	(0.374)	(0.0548)	(0.172)	(-10.13)	(-10.51)	(-10.55)
Below Poverty	0.453***	0.442***	0.427***	103.8***	116.3***	113.5***
	(10.67)	(8.135)	(8.166)	(4.367)	(3.838)	(3.780)
Constant	2.681	7.063	5.613	29,694***	35,467***	35,469***
	(0.488)	(1.039)	(0.779)	(10.85)	(10.51)	(10.91)
Observations	550	350	350	550	350	350
R-squared	0.426	0.459	0.467	0.500	0.515	0.523
BEA Region-Year FE	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Table 5: Transparency and Expenditure Allocation Responsiveness

This table presents results for the relation of transparency and state expenditure allocation responsiveness. Measures of expenditure allocation are the percent of spending by Census Bureau spending to general state expenditure. Voter priorities are as reported in annual PEW polls. Transparency is captured as a binary variable (Implemented), a continuous variable from 0-100 (PIRG Score), and as categorical variables that split transparency efforts into different thresholds (Leading and Middling). Fixed effects are at the spending category-BEA region-year. Standard errors are clustered at the BEA region and year. See Section 3 and Appendix A for discussion of variables and data sources.

	(1)	(2)	(3)	(4)	(5)	(6)
	High Priority			Low Priority		
Implemented	0.256			-0.170		
	(1.262)			(-0.668)		
PIRG Score		0.0101**			-0.0119***	
		(2.573)			(-2.958)	
Leading			0.814***			-0.821**
			(3.033)			(-2.547)
Middling			0.528**			-0.798***
			(2.140)			(-2.877)
Population	0.460***	0.435***	0.420***	-0.00109	-0.0423	-0.0273
	(6.449)	(4.862)	(4.734)	(-0.00975)	(-0.391)	(-0.253)
Total Assets	-0.00755**	-0.00277	-0.00244	0.0178***	0.0153***	0.0147***
	(-2.103)	(-0.642)	(-0.588)	(4.166)	(3.651)	(3.503)
Personal Income	-0.00861***	-0.00819***	-0.00792***	-0.00395*	-0.00261	-0.00291
	(-6.076)	(-4.541)	(-4.342)	(-1.897)	(-1.309)	(-1.443)
Republican	-0.0500	-0.138	-0.140	0.530***	0.582***	0.622***
	(-0.430)	(-0.888)	(-0.908)	(3.152)	(2.948)	(3.122)
Over 65	38.52***	51.71***	51.63***	-9.841	-8.192	-9.952
	(4.359)	(4.435)	(4.586)	(-1.260)	(-0.989)	(-1.201)
School Aged	50.67***	69.83***	70.30***	-18.34**	-19.62**	-23.22**
	(5.798)	(5.809)	(5.997)	(-2.164)	(-2.125)	(-2.342)
Below Poverty	0.0570***	0.0485*	0.0509*	-0.0206	-0.0202	-0.0196
	(2.826)	(1.896)	(1.972)	(-0.898)	(-0.749)	(-0.709)
Constant	-1.324	-6.410*	-6.378*	11.98***	12.43***	13.20***
	(-0.483)	(-1.764)	(-1.848)	(4.722)	(4.600)	(4.640)
Observations	2,200	1,250	1,250	1,100	850	850
R-squared	0.887	0.883	0.883	0.853	0.880	0.880
Spending Category-BEA Region-Year FE	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Table 6: Transparency and Expenditure Allocation

This table presents results for the relation of transparency and state expenditure allocation responsiveness. Measures of expenditure allocation are the percent of spending by Census Bureau spending to general state expenditure. Transparency is captured as a binary variable (Implemented), a continuous variable from 0-100 (PIRG Score), and as categorical variables that split transparency efforts into different thresholds (Leading and Middling). Fixed effects are at the BEA region-year. Standard errors are clustered at the BEA region and year. See Section 3 and Appendix A for discussion of variables and data sources.

Panel A: Areas of Consistently Low Voter Priority

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Transportation			Public Works and Housing			Public Safety		
Implemented	-0.337			-0.731***			-0.0825		
	(-0.953)			(-3.608)			(-0.483)		
PIRG Score		-0.0199***			-0.0121***			-0.00480*	
		(-3.095)			(-3.470)			(-1.899)	
Leading			-1.305**			-1.015***			-0.370*
			(-2.444)			(-4.076)			(-1.931)
Middling			-1.639***			-1.100***			-0.366*
			(-3.687)			(-4.917)			(-1.990)
Observations	550	350	350	550	350	350	550	350	350
R-squared	0.467	0.494	0.501	0.331	0.490	0.507	0.376	0.299	0.303
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
BEA Region-Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Panel B: Areas of Consistently High Voter Priority

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Healthcare			Education			Public Assistance		
Implemented	1.359***			-0.936*			-0.0825		
	(2.711)			(-1.737)			(-0.483)		
PIRG Score		0.0324***			0.00539			-0.00480*	
		(4.011)			(0.538)			(-1.899)	
Leading			2.324***			0.590			-0.370*
			(4.255)			(0.749)			(-1.931)
Middling			2.277***			0.403			-0.366*
			(4.121)			(0.498)			(-1.990)
Observations	550	350	350	550	350	350	550	350	350
R-squared	0.221	0.247	0.253	0.543	0.422	0.422	0.376	0.299	0.303
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
BEA Region-Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Table 7: Transparency and Selective Responsiveness

This table presents results for the relation of transparency and selective state expenditure allocation responsiveness. Measures of expenditure allocation are the percent of spending by Census Bureau spending to general state expenditure. Voter priorities are partitioned by political party as reported in annual PEW polls. Transparency is captured as a binary variable (Implemented), a continuous variable from 0-100 (PIRG Score), and as categorical variables that split transparency efforts into different thresholds (Leading and Middling). Fixed effects are at the spending category-BEA region-year. Standard errors are clustered at the BEA region and year. See Section 3 and Appendix A for discussion of variables and data sources.

Panel A: Own Party Priorities

	(1)	(2)	(3)	(4)	(5)	(6)
	High Priority			Low Priority		
Implemented	0.442			-0.279		
	(1.473)			(-0.937)		
PIRG Score		0.00699			-0.00461	
		(1.659)			(-1.149)	
Leading			0.707**			-0.336
			(2.195)			(-1.064)
Middling			0.664**			-0.650**
			(2.189)			(-2.319)
Observations	1,825	1,057	1,057	1,475	1,043	1,043
R-squared	0.890	0.887	0.888	0.902	0.911	0.911
Controls	YES	YES	YES	YES	YES	YES
Spending Category-Year FE	YES	YES	YES	YES	YES	YES

Panel B: Opposing Party Priorities

	(1)	(2)	(3)	(4)	(5)	(6)
	High Priority			Low Priority		
Implemented	0.243			0.0810		
	(1.176)			(0.445)		
PIRG Score		0.00562*			-0.00499**	
		(1.676)			(-2.198)	
Leading			0.461*			-0.256
			(1.804)			(-1.179)
Middling			-0.00844			-0.0702
			(-0.0368)			(-0.291)
Observations	1,925	1,193	1,193	1,375	907	907
R-squared	0.887	0.892	0.892	0.906	0.907	0.907
Controls	YES	YES	YES	YES	YES	YES
Spending Category-Year FE	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Table 8: Transparency and Solvency

This table presents results for the relation of transparency and state solvency. Measures of solvency include ratio of net assets to total assets, ratio of long-term liabilities to total assets, and per capita surplus or deficit in a state. Transparency is captured as a binary variable (Implemented), a continuous variable from 0-100 (PIRG Score), and as categorical variables that split transparency efforts into different thresholds (Leading and Middling). Fixed effects are at the BEA region-year. Standard errors are clustered at the BEA region and year. See Section 3 and Appendix A for discussion of variables and data sources.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Net Asset Ratio			Long-Term Liability Ratio			TIA Surplus per Capita		
Implemented	-0.0135			-0.0161			-2,923*		
	(-0.384)			(-0.398)			(-1.679)		
PIRG Score		-0.00316***			0.00267***			-134.4***	
		(-4.045)			(2.684)			(-4.599)	
Leading			-0.203***			0.151**			-8,009***
			(-3.693)			(2.327)			(-3.042)
Middling			-0.0707			0.0317			-5,509**
			(-1.459)			(0.595)			(-2.098)
Observations	550	350	350	550	350	350	400	350	350
R-squared	0.578	0.579	0.582	0.500	0.496	0.498	0.560	0.595	0.588
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
BEA Region-Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Table 9: Changes in Transparency and State Performance

This table presents results for the relation of changes in transparency and changes in state performance. Measures of change in performance include changes in expenditure as a percent of GDP, state expenditures per capita, percent of spending by Census Bureau spending to general state expenditure, ratio of net assets to total assets, and ratio of long-term liabilities to total assets. Changes in transparency are captured as changes in a continuous variable from 0-100 (PIRG Score), as well as those changes interacted with those states with leading transparency efforts. Standard errors are clustered at the BEA region and year. See Section 3 and Appendix A for discussion of variables and data sources.

Panel A: Changes in Efficiency and Responsiveness

	(1)	(2)	(3)	(4)	(5)	(6)
	Change in Exp as % of GDP		Change in Exp as % of GDP		Change in % of Expenditure by Category	
					High Priority	*Low Priority*
% Change in PIRG Score	-0.00451***		0.000992		-0.00504	-0.0212**
	(-3.082)		(0.435)		(-0.789)	(-2.309)
% Change in PIRG Score*Leading		-0.00448**		-0.00351**		
		(-2.044)		(-2.244)		
Observations	300	300	300	300	1,100	700
R-squared	0.029	0.014	0.049	0.051	0.004	0.003
Controls	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Panel B: Changes in Selective Responsiveness

	(1)	(2)	(3)	(4)	(5)	(6)
	Change in % of Expenditure by Category				Change in LT Liability Ratio	
	Own Party High Priority	*Other Party High Priority*	*Own Party Low Priority*	*Other Party Low Priority*		
% Change in PIRG Score	-0.0140	0.000158	-0.00671	-0.0234***	-0.0182***	
	(-1.356)	(0.0369)	(-0.870)	(-4.304)	(-2.954)	
% Change in PIRG Score*Leading						-0.0280**
						(-2.092)
Observations	903	1,047	897	753	300	300
R-squared	0.002	0.005	0.003	0.006	0.023	0.021
Controls	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Table 10: Transparency and Stewardship

This table presents results for the relation of transparency and stewardship. Measures of stewardship include the occurrence of unmodified audit opinions, significant deficiencies, and material weaknesses. Transparency is captured as a binary variable (Implemented), a continuous variable from 0-100 (PIRG Score), and as categorical variables that split transparency efforts into different thresholds (Leading and Middling). Fixed effects are at the BEA region-year. Standard errors are clustered at the BEA region and year. See Section 3 and Appendix A for discussion of variables and data sources.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Unmodified Opinion			Significant Deficiency			Material Weakness		
Implemented	0.0698*			-0.00987			0.135		
	(1.803)			(-0.132)			(1.662)		
PIRG Score		0.000938*			0.00263			-0.00138	
		(2.001)			(1.585)			(-0.873)	
Leading			0.0853**			0.195			-0.0828
			(2.080)			(1.504)			(-0.767)
Middling			0.0467			0.135			0.0489
			(1.106)			(1.151)			(0.464)
Observations	550	350	350	550	350	350	400	350	350
R-squared	0.578	0.579	0.582	0.500	0.496	0.498	0.560	0.595	0.588
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
BEA Region-Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Table 11: Descriptive Statistics for Alternative County Government Sample

This table presents summary statistics for the alternative government sample. See Appendix A for discussion of variables and data sources.

	(1) N	(2) Mean	(3) Std Dev	(5) Q1	(6) Med	(7) Q3
County Characteristics:						
Federal Expenditure (in thousands)	1,944	30,984	132,092	1,403	4,116	16,022
GDP (in millions)	1,944	9,866	30,993	642.0	1,714	6,121
Federal Expenditure as % of GDP	1,944	0.6285	1.141	0.100	0.247	0.603
County Audits						
Unqualified Opinion	1,944	0.866	0.341	1	1	1
Going Concern	1,944	0.00617	0.0783	0	0	0
Reportable Condition/Significant Deficiency	1,944	0.539	0.499	0	1	1
Material Weakness	1,944	0.340	0.474	0	0	1
Material Noncompliance	1,944	0.116	0.320	0	0	0
Transparency:						
Leading County	1,944	0.246	0.431	0	0	0
Passing County	1,944	0.451	0.498	0	0	1
Failing County	1,944	0.549	0.498	0	1	1
GPA [Out of 4.0]	1,944	1.327	1.218	0	1	2

Table 12: Transparency and Efficiency in an Alternative Sample

This table presents results for the relation of transparency and county efficiency. The measure of efficiency is federal grant expenditure by counties as a percent of GDP. Transparency is captured as a continuous variable from 0-4.0 (SR Score) and as categorical variables that split transparency efforts into different thresholds (Leading and Passing). Fixed effects are at the state-year. Standard errors are clustered at the BEA region and year. See Appendix A for discussion of variables and data sources.

	(1)	(2)	(3)
	Federal Grant Expenditure as % of GDP		
Leading County	-0.370**		
	(-2.459)		
Passing County		-0.304**	
		(-2.366)	
SR Score			-0.149***
			(-2.831)
Constant	0.720***	0.766***	0.827***
	(19.43)	(13.20)	(11.81)
Observations	1,944	1,944	1,944
R-squared	0.613	0.611	0.616
State FE	YES	YES	YES
Year FE	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

Table 13: Transparency and Stewardship in an Alternative Sample

This table presents results for the relation of transparency and county stewardship. Measures of stewardship include the occurrence of unmodified audit opinions, significant deficiencies, and material weaknesses. Transparency is captured as a continuous variable from 0-4.0 (SR Score) and as categorical variables that split transparency efforts into different thresholds (Leading and Passing). Fixed effects are at the state-year. Standard errors are clustered at the BEA region and year. See Appendix A for discussion of variables and data sources.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Unqualified Opinion			Reportable Condition/Significant Deficiency			Material Weakness		
Leading County	0.0692***			-0.111***			-0.158***		
	(3.483)			(-3.170)			(-4.845)		
Passing County		0.0802***			-0.105***			-0.149***	
		(3.422)			(-3.042)			(-5.112)	
SR Score			0.0390***			-0.0474***			-0.0700***
			(3.906)			(-3.280)			(-5.295)
Constant	0.849***	0.830***	0.814***	0.566***	0.586***	0.602***	0.378***	0.407***	0.432***
	(173.5)	(78.46)	(61.41)	(65.58)	(37.58)	(31.34)	(47.19)	(30.84)	(24.64)
Observations	1,945	1,945	1,945	1,945	1,945	1,945	1,945	1,945	1,945
R-squared	0.315	0.319	0.322	0.243	0.244	0.245	0.181	0.184	0.188
	YES	YES	YES	YES	YES	YES	YES	YES	YES
BEA Region-Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES

***, **, * Indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively (two-tailed).

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